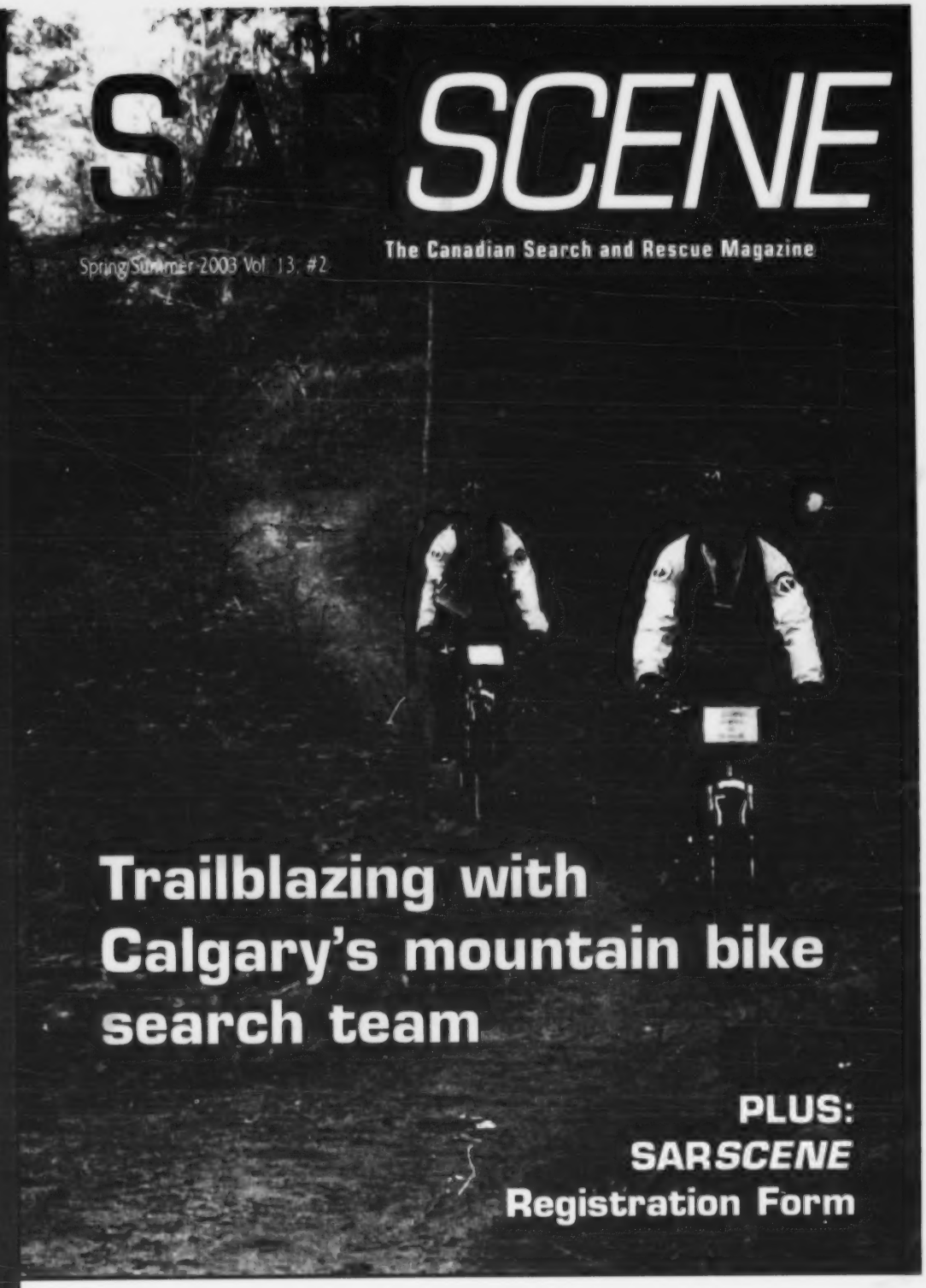

SAR SCENE

The Canadian Search and Rescue Magazine

Spring/Summer 2003 Vol. 13, #2

ISSUE FEATURES

How hunters help and hinder search and rescue

Overcoming communications barriers

Canada's Beacon Registry and SAR Directory go interactive

Five-year study looks at attitudes to PFDs

Trailblazing with Calgary's mountain bike search team

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Editor: Lori MacKay
Email: lmackay@nss.gc.ca

Communications Director: Elizabeth Katz
Email: ekatz@nss.gc.ca

National Search and Rescue Secretariat
275 Slater Street, 4th floor
Ottawa ON K1A 0K2

Phone: 1-800 727-9414
Fax: (613) 996-3746
Web site: www.nss.gc.ca

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BOOK REVIEW

Tracking for search and rescue: A practical manual for novice and advanced handlers

by Susan Bulanda

Boguslaw Gorny will be at SAR*SCENE* 2003 to make a presentation and to sign copies of his book.

I have just finished the best book on tracking for Search and Rescue dogs that I have ever read. Tracking for Search and Rescue Dogs: A Practical Manual for Novice and Advanced Handlers by Boguslaw P. Gorny is a must have for any tracking dog enthusiast.

Mr. Gorny has a unique gift of being able to explain complicated methods in a very easy to understand and readable format. Tracking for Search and Rescue Dogs: A Practical Manual for Novice and Advanced Handlers is a small hardcover book, 88 pages long. It has just been released and is published by Detselig Enterprises, Ltd., Calgary, Alberta, Canada.

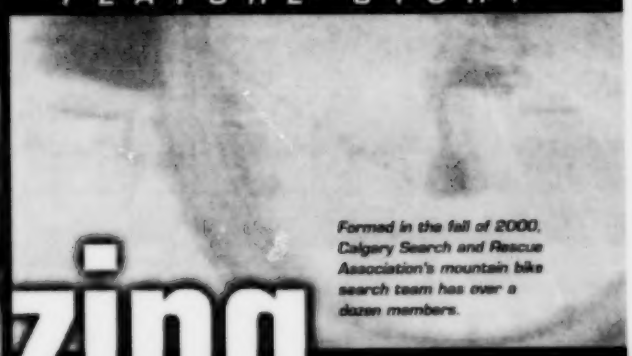
The book is divided into 87 topics that range from selecting the dog to advanced training. Mr. Gorny explains the different theories for teaching a dog to track and the pros and cons of each theory. He covers different methods of motivation, scent theory, and track laying. He emphasizes the need for the tracklayer to have good skills and to understand how to lay a proper track.

Mr. Gorny walks us through the tracking problems from puppies all the way to adult dogs, from novice to advanced. How to use the tracking leash to guide the dog as well as communicate to the dog is thoroughly explained. He gives us tips about how to make the scent available to the dog. He also tells us how to teach the dog to determine the correct scent article when given a choice among two wrong articles and one correct article.

What I found most intriguing was a method he developed which uses a string to show a dog how to track over hard surfaces. One thing that I thought was excellent was the fact that Mr. Gorny includes a section about how to take a dog off of a track to rest and then restart the dog. The book concludes with a progress chart, bibliography and a note from the author.

Overall, this is a very well written and researched book. What makes it extra special is that Mr. Gorny is an experienced dog trainer and SAR dog trainer and handler. He is a biologist at The Canadian Centre for Behavioural Neuroscience at the University of Lethbridge in Alberta. He also formed and runs the Dog Training Centre in Lethbridge and founded the Lethbridge Area Search and Rescue Dog Association. As if that is not enough, he is a certified handler for the Royal Canadian Mounted Police (RCMP) Civilian Search Dog Association of Alberta and the Search and Rescue Dog Group STORAT in Poland.

Susan Bulanda is an Incident Commander and the Head K-9 Trainer for Phoenixville Fire Department K-9 Search and Rescue Unit. She is the author of two books, ***READY! The Training of the Search and Rescue Dog*** *and* ***Ready to Serve, Ready to Save: Strategies of Real Life Search and Rescue Missions****, both published by DORAL Publishing.* ■



Formed in the fall of 2000, Calgary Search and Rescue Association's mountain bike search team has over a dozen members.

Trailblazing

with Calgary's Mountain Bike Search Team

by the Calgary Search and Rescue Association Mountain Bike Search Team

The idea of using mountain bikes in searches is not new. In fact, the Calgary Search and Rescue Association (CALSARA) had been talking about putting together a bike team to assist in ground search efforts almost since its inception 10 years ago. However it wasn't until the fall of 2000 that a Mountain Bike Development Team was formed to research and test the viability of searching on bikes. These enthusiastic mountain bikers spent countless hours meeting, researching, riding and learning how to search while riding. With more than a dozen members currently on the team, and approaching three years of work, we continue to find ways to refine our search techniques.

Our initial research indicated that very few search and rescue organizations were using bikes in searches. For those who had occasionally used bikes in the past, it tended to be as a result of the tasking agency requesting a volunteer SAR group to bring their bikes on a particular search. We believed we could best assist our tasking agencies by having a dedicated group of committed riders trained and equipped to be deployed in various situations and at a moment's notice.

Our research and discussions then focused on the following questions: how useful would such a team be to our tasking agencies? What kind of searches could we perform? Where would these searches likely occur? What equipment would be necessary? What specific things would we train for and how often? What rules, regulations, policies and procedures need to be in place? How do we ensure that our tasking agencies know that CALSARA has this resource that can assist them?

Scope of the challenge

Calgary is a city of almost one million people with an elaborate network of city pathways and parks, in addition to a huge expanse of backcountry recreational areas such as Kananaskis Country and several national parks. Our tasking agencies were pleased to see our interest in developing a bike team and felt this would be a great resource to enhance ground SAR efforts. With an active outdoor population enjoying city parks and pathways as well as numerous hikers, bikers, campers, equestrians, ATVers and others enjoying our wonderful 'outdoor playgrounds', the likelihood that a person may be lost or go missing is indeed realistic. Having a group of trained bike searchers ready to search for these missing persons would result in a more rapid recovery.

Bike expertise

After much debate and discussion, the development team proposed that CALSARA purchase the bikes and related equipment to be used on searches. We had concerns about people arriving at a search with their own bikes in not ideal riding condition, putting them and their teammates at risk. With the association owning the search bikes, we could ensure proper and regular maintenance of all equipment and remove or replace defective parts/bikes.

In order to have the maximum number of bikes in the field at all times, 10 Bike Team members completed a two-day bike mechanics course at the University of Calgary. This has provided us with the knowledge to make necessary repairs in the field or at command post. Only major repairs require a visit to our bike shop.

Our eight Kona Muni Mula bikes are equipped with two panniers to carry enough supplies for 24 hours. Lights, spare batteries, pump, tool kits, locks and other equipment are included with each bike. An enclosed trailer provides a safe storage area and means of transportation for all bikes and repair

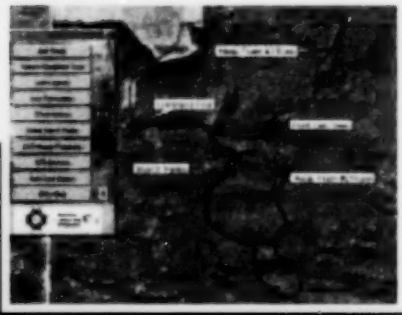
continued on page 2

Primary tasks

from the CALSARA guidelines

- hasty searches
- continuous and multi-directional trail sweeps
- monitor and patrol of confinement and attraction areas
- rapid deployment to distant areas of high probability
- reconnaissance
- quick response to assist in medical situations in the field
- other tasks requested by the Search Manager

Coordinating the search is easier with this new GIS program developed by a search and rescue volunteer.



ADAPTING GIS FOR GROUND SEARCH AND RESCUE

by Gerry Delorme

Because of the complexity of Geographic Information Systems (GIS), specialists were often needed to program ground search and rescue (GSAR) missions. Now, a collaborative effort between the Manitoba Office of The Fire Commissioner, RCMP and a GIS specialist have created an application to help plan and execute GSAR missions. The application, developed by one of the search and rescue volunteers who works in the field of water conservation, uses ESRI's ArcView, an industry standard GIS program that adds tools through a custom dialog.

Where this tool differs from others is that it is completely designed for the GSAR community. Commands and functions have been changed from technical GIS language to language that is familiar to search managers and the GSAR community. The tool allows a user to create search routes, define a search radius, automatically load digital aerial and National Topographic System maps, create and track ground clues, upload and download information to GPS systems, as well as create maps. The tool also allows users to pre-plan GPS missions that help to anticipate periods of high satellite error. Users with no GIS experience can quickly become proficient in GSAR Tools with as little as two days of training.

The application gives search managers more information for making decisions and helps speed the deployment of searchers to the field. Using data such as satellite land cover and an aerial photograph, users can plan missions using detailed information about expected conditions.

"It used to take up to a couple of hours to get a good map into the hands of our searchers", said Scott Kerbis, GSAR Coordinator with Manitoba's Office of the Fire Commissioner. "Now I can have mission-specific maps and a search planned before I step out on to the scene."

For more information contact Scott Kerbis at 1-204-726-6855 or skerbis@gov.mb.ca

Gerry Delorme is a Firefighter with Gladstone Fire and Rescue and is very involved with the Manitoba Office of the Fire Commissioner GSAR program. ■

continued from page 1

equipment when not in use and acts as repair center when needed. A four-wheel drive, eight-passenger suburban truck allows us to haul all needed equipment and personnel to each search or training exercise.

All Bike Team members wear an identifiable bike uniform and approved helmet consistent with the yellow and black colours of CALSARA's uniforms. In addition, all riders must wear eye protection, riding gloves and appropriate footwear for riding, pushing and foot searching. Individual search criteria will dictate parameters such as speed of searching, spacing, duration and distance to cover and number of riders per team. We always work with a minimum of two riders, one being designated as Team Leader. This is not only for safety reasons but also to allow riders to search opposite sides of the trail.

The Bike Team trains twice monthly: one weekday evening and one Saturday in addition to all regular CALSARA training, committee work and searches. Training often consists of familiarization with high probability search areas, specific scenario training relative to speed, spacing, probability of detection, mock search exercises, table-top planning and map reading, riding skills, fitness and teamwork. All members contribute significantly to the team by riding several times per month on their own. Training with our team is year round.

Advantages of the Bike Team

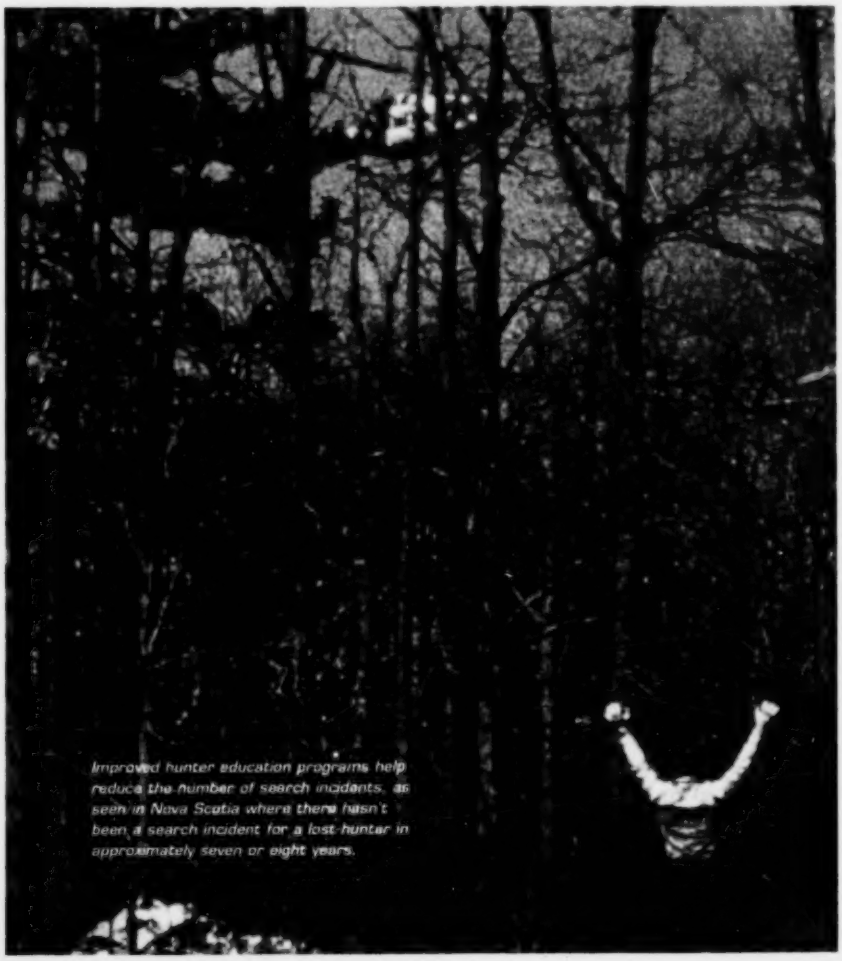
We have found the Bike Team to be a valuable addition to our organization. We have not only assisted in searches in the backcountry, but also in several city searches for children or other missing persons. The increased speed at which bike searchers can perform hasty trail sweeps, reconnaissance and other functions assists the Search Managers with their plans to use foot searchers. Redeployment to another search area is quick and all riders are prepared to lock their bikes and search on foot when necessary. Bikes can travel in sensitive areas where ATVs may be prohibited and can be utilized to ferry equipment to distant teams in need. The CALSARA Bike Team has worked in partnership with local conservation authorities and parks staff to identify hazards in the community. We have also provided patrol and First Aid assistance in the MS Walk and for the MS Bike Tour.

As time passes and more people become familiar with the use of bike teams in volunteer search and rescue groups, more bike teams will be created. We sincerely hope these teams will share their ideas with all search and rescue groups to facilitate the expansion of bike teams overall. We would like to extend our thanks to our supporters in the Calgary area. Without their help this Mountain Bike Team would never have become a reality.

Visit the website at www.calsara.com or contact the Team Leader at biketeamleader@calsara.com. Good searching and remember to 'keep the rubber side down.' ■

How hunters *help* and *hinder* search and rescue

In Nova Scotia, one in 10 people is involved in some sort of hunting activity, according to Tony Rodgers, Executive Director of the Nova Scotia Anglers and Hunters Association, and a NASAR-trained search manager.



Improved hunter education programs help reduce the number of search incidents, as seen in Nova Scotia where there hasn't been a search incident for a lost hunter in approximately seven or eight years.

Many of the search and rescue teams in Nova Scotia, he says, are made up of hunters, former hunters, or spouses of hunters. This is important during a search because they bring the skills of a hunter, the knowledge of a hunter and can think like a hunter while acting as a searcher. One thing hunter-searchers don't bring to a team is a fear of the woods. Their knowledge of the area can mean the difference between a relatively quick search and a long one.

Rodgers notes that the quality of hunter education is one of the attributes that accounts for successful searchers.

Hunters are usually well prepared for problems because they are required by law to wear an orange vest and hat to be visible from all sides, and carry water-proof matches, a knife or axe and compass that you know how to use. As well, most hunters carry rifles and can fire three successive bullets to signal distress – this helps searchers to search by sight and sound. Even if a hunter cannot move or signal to searchers, the bright coloured clothing makes it easier for searchers, ground and air alike, to find someone in the woods. But not all scenarios are this good.

Lost hunter behaviour

Accidents can happen easily where help is not readily available. Hunters are at a great risk for getting lost during the 'thrill of the chase' when tracking a specific animal. As well, a hunter may go deeper into the woods and very far

continued on page 4

A hunter's knowledge of the woods is an asset in a search. But ironically, a lost hunter poses a greater challenge for rescue teams

continued from page 3

off the trail. The pursuit can take a hunter across many different paths into unknown terrain.

Some hunters might not admit they are lost and continue walking around trying to find the way back to camp. It has been found that hunters travel further from their last known location. According to Ken Hill, expert in lost person behaviour, "interviews with hunters reveal that they frequently make an important distinction between being lost or merely 'turned around.' "

The largest demographic of hunters, younger males, is thought to be better equipped, mentally and physically, to handle themselves in the wilderness. But according to Hill's study on lost person behaviour, hunters over the age of 65 aren't any less able to navigate. In fact, it was found that both younger and older hunters had almost equal chances at finding their way once lost in the woods.

Age is not the only factor in getting lost. Rodgers explains that "it comes back to knowledge and skills, and preparedness. Since hunters often don't consider the possibility of becoming lost, they are the least likely to plan for it. In fact, many don't adequately prepare for the environment they are entering and end up lost as a result." Inadequate equipment and supplies as well as inadequate knowledge of the area are the cause of many searches.

The limited data that is available indicates that most lost hunters need search teams to rescue them and only a few make their own way out. According to Rodgers, the key to avoid getting lost (and minimizing search missions) is to leave behind a copy of the itinerary, and stick to it. With the vastness of the outdoors, it could take a long time for searchers to find the hunter's truck, let alone the hunter.

With the improved hunter education program in Nova Scotia, Mr. Rodgers says there hasn't been a search incident for a lost hunter in approximately seven or eight years. ■

All Alberta search and rescue teams are expected to receive the CER course training which gives them the proper training to assist in peacetime disasters.

by Paul Olmstead

The Civil Emergency Response (CER) course was developed to prepare all trained Alberta volunteer search and rescue teams to assist authorities in the event of a peacetime disaster – either man-made or natural.

CER is a basic knowledge and skills course involving many areas of disaster response, and is designed to give trained volunteers awareness and information that could be used in any disaster or emergency event. The course will have an impact on the emergency services field in several ways.

Firstly, authorities will have a much larger resource base to draw from, depending upon the circumstance. Secondly, search and rescue teams will have a larger tasking and, of course, more opportunity to train in roles not traditionally associated with search and rescue, as well as the possibility of being called out more frequently.

CANADIAN COAST GUARD AUXILIARY CELEBRATES

25 YEARS

OF MARINE SAFETY AND SEARCH AND RESCUE

This year the Auxiliary celebrates 25 years of exemplary service and dedication. Almost 5000 members and 1500 vessels provide humanitarian service around the clock, preventing loss of life and injury.

A Silver Jubilee celebration at Fort Henry in Kingston, Ontario on August 9 – exactly 25 years to the day since the creation of the Canadian Marine Rescue Auxiliary – marked the anniversary.

Emergency training nds role of search and rescue volunteers

The potential for use will hopefully prevent teams from losing their training skills while waiting for a call-out. We have to remember that SAR volunteers are high-energy people, with a desire and time to assist in this special area. The importance of keeping a team active and motivated was one of the main reasons for creating CER training, recognizing that we have a valuable resource with a potential to assist.

SAR teams also come to authorities as a "package deal." They are professional, organized and have basic skills in first aid and communications.

CER topics

In the CER Course additional topics taught include:

- Personal, home and road safety kits
- Dangerous goods
- Evacuation
- First aid considerations and triage centers
- Natural disasters such as floods and tornadoes
- Disaster tools
- Road blocks / traffic control
- Search patterns
- Utility shutoffs.

This is then broken down into categories such as handling pets and livestock, as well as electrical and gas shut off jobs. Students are given a refresher course in basic knot tying and in some casualty evacuation techniques using baskets, chairs and multiple rescuers.

Alberta instructors are SAR team members who currently teach basic SAR courses and have several years of SAR experience. There is an application process in place for this; Alberta currently has 14 instructors and will add 10 more this year.

To date the course has been taught in several Alberta communities and always with the assistance of the local fire and EMS services. All Alberta teams are expected to receive this training.

The feedback so far has been 100 per cent in favour of this type of cross-training and assistance.

Volunteers are not there to replace any of the trained emergency services workers. CER Teams will be used on a call out basis to assist and provide support that may otherwise tie up a professional worker in a non-technical function such as traffic control. CER team duties may include the procurement of blocking, maintaining perimeters or the filling of water-filled backpacks at grass fires.

SAR volunteers often respond to large-scale events and are eventually asked to assist. In 2000 at the Pine Lake Tornado, volunteers were tasked with locating propane tanks and shutting them off. This relatively simple task required knowledge of basic safety issues regarding propane. That is a prime example of CER.

The CER course bridges the gaps often found between agencies in any community.

The roles for trained search and rescue volunteers during peacetime disasters are too many to name in this article. Their ability to respond to a disaster safely and knowledgeably can be guaranteed with some additional basic training over and above typical search and rescue courses.

SAR Alberta plans on offering this course to all SAR groups in the province. Each volunteer will receive a two day course, complete with a manual, an orange vest and a hard hat of chosen color to identify them at an incident.

This course and manual will eventually be made available to other provinces through 'train the trainer' courses and the manuals will be available from SAR Alberta.

For more information, contact Paul Olmstead at polmstead@compusmart.ab.ca.

Paul Olmstead is a Search Manager with the Edmonton Police Service, instructor and course developer with SAR Alberta. ■

Innovation on land, sea and in the air

The following six projects are supported by the New Search and Rescue Initiatives Fund.

RCMP's mapping and visualization tools

An RCMP New Search and Rescue Initiatives Fund project for 2003 is developing visualization and mapping tools to make searches more effective. The solution is a display program for PCs that can bring up geographic information systems (GIS, or layers of digital maps), aerial photography and fly-by imagery.

Search managers will be able to evaluate the terrain and elevation of a given search region. Map layers can be added and removed, so the manager will also be able to see unique patterns of information relevant to a search mission. Critical sites such as hazards, clues, and tasked areas can be identified and marked on the map display.

The display program is coordinated with planning and operations procedures; so for example, a region drawn by the manager is automatically measured and residential addresses can be listed for printing. The operations sequence continues through wrap-up, when a complete history of a search can be added to the local database and printed for lessons learned.

This project was first developed for urban searches, but is being adapted to help with rural searches, evidence searches, and some criminal and emergency evacuation applications. The RCMP is trying to keep the program cost-free for policing agencies across Canada and hopes to have it available in 2006. ■

Transport Canada's low-cost general aviation beacon

With the COSPAS-SARSAT announcement of the February 2009 phase-out of satellite processing of 121.5 MHz emergency beacons, Transport Canada is developing a new low cost 406 MHz ELT for General Aviation. This R&D project is funded from the National Search and Rescue Secretariat's New SAR Initiatives Fund, and is being managed by Transport Canada's Transportation Development Centre.

The general aviation market is fairly price-sensitive and it is reluctant to change to these newer 406 MHz beacons because of the increase in cost. Some of the 406 MHz ELTs available today can cost up to $3000, including installation.

The initial phase of the project included a feasibility study on producing a 406 MHz ELT at a price comparable to the 121.5 MHz ELT. Included in this study was an investigation of design elements used in cellular phones and GPS technologies to determine if these techniques can be incorporated into a low-cost 406 MHz ELT design. The outcome of this study has been positive, and work is continuing on a follow-on phase to develop this new beacon.

The low-cost 406 MHz ELT has received COSPAS-SARSAT certification this year and is in the process of getting TSO-C126 approval. This approval is a mandatory requirement in order to install and use ELT in aircrafts.

For further information you can contact Howard Posluns (514-283-0034, poslunh@tc.gc.ca) at the Transportation Development Centre. ■

RCMP's new diving training and equipment increase safety

The Royal Canadian Mounted Police's (RCMP) underwater diving teams' training has been improved and standardized thanks to the 2001 project funded by the New Search and Rescue Initiatives Fund.

The goal was to purchase common equipment and train all RCMP underwater divers to the same standards to reduce death and injury to dive team members. With the increased training, the health and safety of team members is ensured.

Because of this new training, the RCMP has been able to perform operations it hasn't been trained for or allowed to do in the past, for example, diving in contaminated waters. These operations provide closure for families and also provide critical information to the coroner. ■

Preparing for tsunamis in the Pacific region

The Department of Fisheries and Oceans tsunami research project began in 2001 to develop models of typical tsunami currents that will affect the Pacific coast within the next few hundred years.

Natural disasters are always hard to predict, but with proper research and preparedness, the effects of a natural disaster can be lessened. An earthquake registering a seven or eight on the Richter scale can cause a tsunami with a height of five metres or more.

Such an event is likely to happen in the next few hundred years and this research is studying ways to mitigate the disastrous effects by training search and rescue teams to prepare and react to such an event. This study will also inform people of the risks of tsunamis and develop plans and evacuation routes for mariners to take and stay safe. ■

Canadian Beacon Registry Enhancement

Development of the Canadian beacon registry database became a reality in early 2000 when it was approved as a New Search and Rescue Initiatives Fund project. Completed and online by May 2003, the enhancement of the computerized database helps the Canadian Mission Control Centre and Joint Rescue Coordination Centres (JRCCs) obtain more accurate information to save a life.

The design ensured data would be up-to-date, accurate and easily accessible to the JRCCs. With the previous database, information downloaded to the JRCCs was sometimes corrupt and inaccurate because that database was over three years old and experiencing technical difficulties. With this new database, information is quicker and easier to retrieve and it ensures that each JRCC receives the most accurate and up-to-date information necessary to perform an effective search and rescue mission.

Another benefit of the new beacon registry is the time it saves for the beacon owner. This new system allows the owner to register the beacon or update the information him or herself immediately, instead of sending the information to the NSS and waiting for the three-day turn around. This assures the JRCC always has access to the most up-to-date information.

To register, update or change your beacon information, go to **http://beacons.nss.gc.ca**. ■

Funded by NIF, the Canadian beacon registry enhancement saves time for both the beacon owner and the rescue coordination centres.

Tremendously popular in western Canada, Bobbie the Safety Boat teaches children about water safety education.

Bobbie the Safety Boat

The Canadian Coast Guard Auxiliary, Pacific Region's Bobbie the Safety Boat program, is making waves in western Canada as a search and rescue prevention program aimed at children through water safety education.

Based on an American program, Bobbie, the animatronic remote-controlled robot on wheels, will be used to teach prevention and water safety at boat shows, schools, hospitals and other events throughout the Pacific region.

At Marine Fest in Nanaimo, B.C., Bobbie was a big hit and wowed children as he squirted water at the crowd and chatted with children along the parade route.

So far, the existing phase of Bobbie has been funded by the Canadian Coast Guard Auxiliary, Pacific Region, and with a donation from Buoy-o-Boy. The New Search and Rescue Initiatives Fund will support the next phase for three years. ■

www.nss.gc.ca/site/newSARInitiatives/index_e.asp

New orbit for search and rescue satellites

THE NEW 406 MHz BEACONS CAN PINPOINT THE DISTRESS SIGNAL WITHIN 2 KM, 10 TIMES MORE ACCURATELY THAN OLDER BEACONS. THE LATEST MEOSAR SATELLITES WILL PROVIDE TOTAL GLOBAL COVERAGE IN REAL TIME.

by Jim King

Ever since the COSPAS-SARSAT® satellite system for search and rescue (SAR) started operating more than 20 years ago, it has been continually enhanced to provide better, quicker service for aviators, mariners and land users in distress. This satellite system informs SAR authorities of the distress alert, as well as the location, even when the users have no idea where they are. The system has already helped save more than 15,000 lives worldwide.

Some of the new features added to the original system include the implementation of new distress beacons operating at 406 MHz, which are far superior to the original 121.5 / 243 MHz beacons. There are now about 300,000 of these new beacons deployed, while 600,000 of the old type are still in use. These new beacons allow the distress location to be automatically computed by the satellite system 10 times more accurately (to within 2 km) and the beacon user to be identified. On the other hand, the old 1960s technology beacons gave only an approximate location (to within 20 km) and no user identification, since the 'wow, wow, wow' signal was similar for all such beacons. In addition, the 406 MHz system provides global coverage for beacons activated anywhere on Earth, as the beacon signals are stored onboard the satellite and retransmitted to each ground station as the satellite orbits the Earth.

LEOSARs

Figure 1: Cospas-Sarsat satellites in polar, low-Earth orbit (LEO)

The original COSPAS-SARSAT system of the 1980s comprised a constellation of four satellites in polar, low-Earth orbit, dubbed the LEOSAR system (Figure 1), and provided services for 121.5, 243 and 406 MHz beacons. This system worked well, and is still in use today, but has inherent time delays, ranging from minutes to hours, in detecting and relaying distress signals because the low altitude satellites (at about 1000 km) view only a portion of the Earth at any instant as they circle the globe.

This LEO system could not be made much better for 121.5 / 243 MHz beacons, due to technical limitations of the beacons and those radio channels.

GEOSARs

Enchancements were made to the 406 MHz system in the 1990s, when 406 MHz repeaters were added to new satellites in geostationary-Earth orbit at 36,000 km (Figure 2). These satellites, known as GEOSARs,

Did you know?

- According to a 2002 COSPAS-SARSAT Council survey, there are approximately 314,000 emergency beacons operating at the 406 MHz level worldwide, about double the number since1997.
- There are 29 manufacturers of 406 MHz beacons and they produced 46,058 beacons in 2002.
- In 2002 more Emergency Position Indicating Radio Beacons (EPIRBs) were produced than Emergency Locator Transmitters (ELTs) and Personal Locator Beacons (PLBs) combined. There were 5,686 ELTs produced, totaling 12 percent, and 12,094 PLBs produced, for a total of 26 percent.
- Out of the 314,000 emergency beacons operating at the 406 MHz level, there are 23,516 ELTs operating, 24,663 PLBs, and 265,821 EPIRBs.
- The average life-cycle of a 406 MHz beacon is 10 years. Based on this life-cycle and beacon production data from 1992, about 16,600 beacons were removed from service in 2002.

Figure 2: LEO & Geostationary-Earth orbit (GEO) satellite constellations

constantly view a huge, fixed area of the Earth, thereby eliminating the time delay to relay 406 MHz distress signals. This rapid relay of the distress signal and identification of the user was a big improvement, but this system was not able to automatically compute the location of the distress as the LEO system could do. However, there is an option available in 406 MHz beacons to include the location as part of the distress signal, which can easily be done if a navigation receiver, such as GPS, is connected to, or built into the distress beacon. Such beacons are now becoming more common as the additional cost of including GPS decreases.

This GEOSAR system still has some limitations since the beacon signal requires a direct line of sight to one of the satellites. There are some distress situations where this is impossible, such as in polar regions or when a plane crashes on the wrong side of a mountain or in a deep valley or when a maritime beacon is blocked by the ship superstructure.

MEOSARs

Figure 3: Navigation satellites in medium-Earth orbit (MEO), such as GPS, Glonass and the new Galileo system

To further improve the performance of the system, plans are now being made to fly 406 MHz payloads on future navigation satellites, such as the United States' GPS, Russia's Glonass and Europe's new Galileo system (Figure 3). These satellites, in medium-Earth orbit at about 20,000 km, will be known as MEOSARs. These constellations could each have about 20 to 30 satellites that are continually moving across the sky, thereby providing global coverage, including the poles, with multiple viewing angles to the satellites so no area would be blocked. This MEOSAR system could automatically detect and locate all active 406 MHz beacons in the world with no time delay and determine exactly when each beacon was turned on and off.

This MEOSAR system would provide the ultimate distress alerting and locating service for worldwide operations, and will be demonstrated in the next few years. If such demonstrations confirm the viability of this system, it would be implemented over the next 5 to 10 years. Since satellite reception of the old 121.5 MHz beacons is to be phased out starting in 2009, an enhanced 406 MHz satellite system would be in place to provide far superior service.

**COSPAS-SARSAT is the international satellite system launched by Canada, France, the United States and the former USSR in 1982 that will receive the signal of an emergency beacon and relay the beacon position to rescue authorities.*

Jim King is the Director of Major Satellite Communications Programs at the Communications Research Centre Canada, a research laboratory of Industry Canada. ■

Canadian beacon registry saves lives worldwide

Emergency beacons have saved over 15,000 lives world-wide, and with the new Canadian Beacon Registry database the potential to save more lives will increase.

There are three types of emergency beacons:

- Emergency Locator Transmitter Beacons, used on aircraft
- Emergency Position Indicating Radio Beacons, used on marine vessels, and
- Personal Locator Beacons, used on land.

Currently, Canada is the only country in the world to have an online beacon registration database and it is also one of only 17 countries to have a database with beacon owner information. The United States is working on a database of its own that should be operational in summer 2003, and work is also being done on an international beacon registry database that will be available to search and rescue agencies around the world.

When a beacon goes off in Canada – either because someone is in distress and set if off themselves, or because it was triggered in a crash – a signal is sent to one of the satellites orbiting the Earth and then the satellite redirects the signal to the Canadian Mission Control Centre in Trenton, Ontario. Once the signal and beacon code are received, the rescue personnel decode it to find its owner and emergency contact information. With the additional emergency contact information, rescue personnel are able to call the contact and see if an emergency situation is taking place before beginning a costly search effort.

Anyone who owns a Canadian-coded beacon can now register it on the online database at **http://beacons.nss.gc.ca**

(see page 7 for information on the online project.)

Satellites orbiting the earth receive the distress signal from an emergency beacon and then redirect it to the Canadian Mission Control Centre in Trenton, Ontario where personnel determine whether a rescue mission is necessary.

Relive SARSCENE 2002

Video clips from SARSCENE 2002 wreath-laying ceremony, opening ceremony, games, presentations, exhibits, demonstrations and banquet are now online at www.nss.gc.ca/site/SARScene/workshop/2002/videos/videomenu_e.asp. Audio tapes from the presentations can be ordered from contape@cyberus.ca or (613)824-2584. A list of presentations is available at www.nss.gc.ca - click on SARSCENE. ■

Safely Home – Alzheimer Wandering Registry

by Linda LeDuc

Alzheimer Disease is a degenerative brain disorder that destroys vital brain cells. It most often occurs in people over 65, but can affect adults at an earlier age. One in 13 Canadians over the age of 65 has Alzheimer Disease or a related dementia. People with Alzheimer Disease sometimes lose the ability to recognize familiar places, to communicate or to remember their own name or address. They may leave home, become confused and get lost. This can be dangerous for people with the disease and worrisome for caregivers. But there is help.

Safely Home – Alzheimer Wandering Registry is a nationwide program designed to help find a person who is lost and assist in a safe return home. Developed by the Alzheimer Society of Canada in partnership with the Royal Canadian Mounted Police, the registry on the Canadian Police Information Centre stores vital information. Registration in the program is voluntary. For a one-time fee of $25, the registrant will receive an identification bracelet and identification cards.

For more information on the program, contact your local Alzheimer Society or the Alzheimer Society of Canada at 1-800-616-8816 or visit their Web site at www.alzheimer.ca/english/care/wandering-intro.

Information on this program will be presented at SARSCENE *2003.* ■

Award for leadership

Major Grant MacDonald, who recently returned to the Canadian Forces after a two-year secondment to the National Search and Rescue Secretariat, was awarded a DM/CDS Renewal award for his leadership in the development of seamless search and rescue across Canada. The award cites his work "as Team Leader of the National Search and Rescue Secretariat's Strategic Transition Initiative Project" and commends him for his ability "to reconcile complex jurisdictional issues and develop the first ever, cohesive approach to program policy and planning for the six departments with Search and Rescue responsibilities. This work has resulted in a better coordinated, more cost-effective Search and Rescue Program, aimed at saving the lives of people in distress." ■

Major Grant MacDonald

Search and rescue directory goes live

Organizations listed in the Directory of Canadian Search and Rescue Organizations (www.nss.gc.ca/sar_directory/index_e.asp) can now add, update or delete information about their organizations. The directory allows search and rescue organizations to post information about themselves, their area of responsibility as well as contact names and numbers. If you would like to add your organization's information, contact the Secretariat at 1-800-727-9414 to receive a user ID and password. Organizations already listed will have received theirs in the mail. ■

Safe Canada site covers wide range of emergencies

by Patrick Kennedy

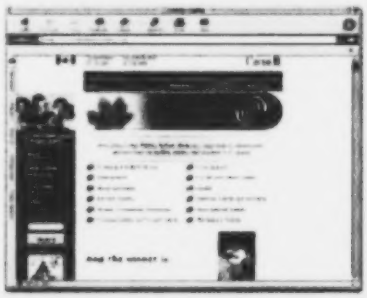
The federal government's public safety portal is a government website developed by Canadians, for Canadians, and offers a wide variety of safety information, including tips on search and rescue and emergency preparedness.

A visit to www.SafeCanada.ca lets you:

- Learn about fire prevention and how to plan an escape route
- Pick up important safety tips about outdoor activities such as camping, safe barbecuing and what to do in case of a bear attack
- Prepare yourself and your family for an emergency
- Learn about the most recent food recalls and allergy alerts
- Find up-to-date information on product and vehicle recalls
- Check for weather warnings in your area, and across the country
- Learn what to do in the event of a flood, earthquake, forest fire, etc.
- Access the latest health and travel warnings
- Protect yourself against frauds, scams and identity theft
- Teach your children about safety through interactive games and activities such as the "What belongs on your boat?" quiz.

The Public Safety Portal, coordinated by the Department of the Solicitor General of Canada, has links to over 25 government organizations responsible for public safety or security. Over the next 12 months, the coordinators will be forging pilot partnerships with provincial governments and non-government organizations.

For more information, contact Karen Savoie, Manager, Government On-Line, Solicitor General Canada at (613) 991-0645. ■



Tim Jones

Photo: Bruce Moffat

Tim Jones received one of five Certificates of Achievement in 2003 from the National Search and Rescue Secretariat at the Annual General Meeting of the North Shore Rescue team in Vancouver last June. Mr. Jones has been instrumental in training search and rescue (SAR) volunteers in the extremely diverse conditions that BC terrain presents. Among his many duties he also acts as the Helicopter Flight Rescue Systems Coordinator for his team.

Left to right: Mayor Ron Wood, District of West Vancouver; Tim Jones; Mayor Barbara Sharp, City of North Vancouver; and Mayor Don Bell, District of North Vancouver. Two of the team's rescue vehicles are in the background. ■

Correction

In the Fall/Winter Vol. 12, No. 3 issue of SAR*SCENE*, it was reported that 413 Squadron won the Diamond Trophy for best overall SAR unit. This was incorrect. The 413 Squadron won the Team Spirit award, while 424 Squadron from 8 Wing Trenton was presented with the Diamond Trophy. ■

Upcoming Events

Canadian Safe Boating Council Annual Symposium
September 25–28, 2003

This year's symposium highlights the work of the PFD taskforce, the National and Regional Canadian Coast Guard update and the operator competency card update and more. It takes place in Longueuil, Quebec. *www.csbc.ca/html/AnnualConference.html*

International Search and Rescue (ISAR) Competition 2003
September 26–27, 2003

An annual event between Auxiliary teams in the United States and Canada, this year's ISAR competition features events designed to test the volunteers' ability to plan, communicate and conduct a marine search and rescue mission. ISAR will be held in St. John's, Newfoundland and Labrador. *www.ccga-gcac.org/isar2003/whatis_e.asp*

SAR*SCENE* 2003
October 15–18, 2003

This year's SAR*SCENE* workshop will be held in Kingston, Ontario. The National Search and Rescue Secretariat and the Ontario Provincial Police are the co-hosts, with support from the Ontario Search and Rescue Volunteer Association. For more information, visit *www.nss.gc.ca* or call 1-800-727-9414.

Canadian Power and Sail Squadrons 55th Annual Conference
October 22–25, 2003

This year's conference, Tall Tides, is in Saint John, New Brunswick. The 55th annual conference and annual general meeting will be at the Delta Brunswick Hotel, close to many points of interest and attractions. *www.cps-ecp.ca/pdf/Insert.pdf*

Canadian Marine Advisory Council (CMAC) National Meeting
November 3-6, 2003

The next CMAC national meeting will be held in Ottawa, Ontario. Visit the Transport Canada website for details as they become available. *www.cmac-ccmc.gc.ca/En/onlinemenu.htm*

Emergency Response Conference
November 17–20, 2003

In Long Beach, California, Emergency Response 2003 focuses on how land, air and marine emergency organizations can better integrate their response to major incidents and manage new missions imposed by increased homeland security concerns. *www.emergencyresponse2003.com*

International Boating and Water Safety Summit (IBWSS)
April 18–21, 2004

The National Safe Boating Council and the National Water Safety Congress will host the eighth annual Summit in Panama City Beach, Florida. The Summit will include nearly all aspects of boating and water safety. *www.safeboatingcouncil.org/summit/call.htm*

Canadian Hydrographic Conference
May 24-27, 2004

Celebrating 100 years in hydrographic achievements, the next conference will be in Ottawa, Ontario. The program highlights the opportunity to revisit the pioneering spirit and achievements of early hydrographers, and then to explore how to build upon these accomplishments and look to the future. *www.chc2004.com/main.php*

Five-year study finds 'perceived risk' to be key factor in wearing PFDs

by Sharon Andrews

In the December 2002 edition of The Canadian Safe Boating Council's newsletter, an article featuring its annual symposium mentioned that the keynote dinner speaker, journalist Ann Medina, had "challenged all present to reach 'real boaters' such as herself with safety messages that were realistic and believable." Present in the audience, and well underway to meeting that challenge, was a member of the Canadian Coast Guard's Office of Boating Safety, Brian Avery. By then, under Mr. Avery's direction, the Office of Boating Safety was nearing completion of a five-year research and development project to develop appropriate and meaningful communications strategies and messages after extensive social market research to increase the wearing of PFDs and lifejackets among Canadian recreational boaters.

That research began in 1998-99 with the formation of a Steering Committee, a review of existing literature, and the conducting of focus group sessions all aiming to establish baseline wear-rates across the country, and to understand factors motivating boaters to wear or not wear PFDs. Much of the existing data were fragmented and regional in scope; however, by understanding the issues, a questionnaire could be designed that would glean significant and quantifiable data.

The 2000 boating season saw a national observational study of boaters actively participating in boating activities. The baseline established was 20 percent of Canadian boaters currently wear PFDs (on boats six meters or less). Other interesting findings include operator behaviour affects passengers' wear rates and two areas showed higher than average wear rates – the Far North (44 percent) and Newfoundland and Labrador (60 percent).

Patterns emerge

In 2001 a national telephone survey asked about 4,000 respondents about their attitudes and beliefs with regard to PFDs and lifejackets. Patterns that emerged indicated that:

- decisions to wear are often based on the amount of risk present
- most people would wear a PFD if asked to do so by the operator of the boat
- affluent and highly educated individuals claim greater control over the environment, reducing their perceived need to wear a PFD
- women are more safety conscious than men, and
- a majority would support mandatory wear.

The next year, focus groups in the two areas where rates of wear were higher gave more insight. Boaters who reported that they always or almost always wear a PFD mentioned factors such as environmental risks (larger lakes, ocean, colder air and water temperatures), the ability to be enough to handle the unpredictable, a near-drowning experience or having known a drowning victim, and even

parental instruction to wear a PFD as influencing their decision. Overall, respondents felt the boat operator is responsible for ensuring the safety of all occupants, and the decision to wear should be based on individual assessment of risk involved – mandatory wear therefore being untenable.

The national attitudinal survey was completed in the Fall of 2002, when over 600 respondents in the North were contacted. As in the rest of Canada, the majority were not aware of differences between lifejackets and PFDs[1]. However, northern boaters showed more positive attitudes than those in the rest of Canada toward PFD wear (80 percent vs 70 percent respectively) and also displayed strong beliefs that PFDs are necessary despite strong individual boating skills.

Decision based on degree of risk

The two-part attitudinal survey provided detailed comparisons of attitudes. One commonly shared attitude was that the key driver of PFD wear is perceived risk. If a boater thinks that the risk is manageable, a PFD will not be worn. The more frequently a person safely undertakes a boating activity, the lower the perceived risk and the lower the wear rate.

The majority of Canadians are somewhere in the middle of a continuum ranging from those who never

[1] A lifejacket is designed to turn an unconscious person into a face upwards position within a few seconds. A personal flotation device (PFD) keeps a conscious person's head out of water in calm conditions and assists them in rough water. A PFD is not designed to turn an unconscious person from a face down position to a face upward position. *(SARSCENE magazine, Summer 1998)*

think about wearing a PFD to those who always wear one. While most boaters believe that boating activities would be safer if they wore a PFD, and more than 90 percent carry the appropriate number on board, wear rates are low – the reasons most often given include discomfort, lack of mobility to hunt and fish, or stained and smelly material. Because, many boaters are still unaware of recent improvements to or differences between PFDs and lifejackets, any campaigns to increase wear must certainly be preceded by more education about these terms and the attributes of the products.

Although the research is completed, the project's manager, Brian Avery, superintendent of the Coast Guard's Office of Boating Safety in Newfoundland and Labrador, points out that there is still a lot of work to be done, especially in the development of communications tools. Besides the fact that risks in boating vary across the country and any marketing campaign will need to be regionally tailored, marketing and communications professionals estimate that changes in attitudes displayed through behaviour change will not begin to be noticed until at least five to 10 years after an effective communications strategy has been in place.

Sharon Andrews works for the Canadian Coast Guard's Office of Boating Safety in Newfoundland and Labrador. ■

Breaking the communications barrier

The most common interoperability problem cited by SAR groups was a lack of common radio frequency and equipment.

Standing alone, the different search and rescue groups serve the individual agencies well, but in a cooperative rescue assignment, these good practices become hindered when there are technical barriers to communications.

For example, when the Royal Canadian Mounted Police (RCMP) are tasked to perform a ground search, they may need the help of air assets who can scan the area from above to get a sense of geography and perform an air search at the same time. But what if they can't communicate because of a difference in radio frequency? This could lead to delays in rescue and potential loss of life.

The National Search and Rescue Program relies on a co-ordinated and cooperative approach, and without the standardization of practices, training and equipment, this cannot be fully achieved.

One seamless program

Although Canada has one of the best search and rescue systems in the world, ties should be encouraged to create one multi-jurisdictional program. The goal is to make Canadian search and rescue seamless and total cooperation and interoperability are the methods to achieve it.

The need for interchangeable equipment is essential because in any given emergency situation, at least three federal agencies may be tasked to respond. For example, a search for a disabled oil tanker might use the weather resources of Environment Canada's Meteorological Service of Canada, a Canadian Forces helicopter, searchers from the Canadian Coast Guard and the Canadian Coast Guard Auxiliary and dive teams from the RCMP. All of these groups need to work together to ensure the search is as efficient as possible.

Compatible equipment

Currently, an Interoperability Working Group, chaired by the National Search and Rescue Secretariat, is studying the issue and researching ways to standardize practices and equipment. With a standardization of equipment, it is possible that search and rescue groups will eliminate communications barriers. The most common problem cited was a lack of common radio frequency and equipment. This hindered ground search and rescue forces in their contact with air and marine resources during a search mission.

Common information

Interoperability is not limited to standard equipment needs, but extends to accessibility of information and data. When different agencies or groups are working together, not everyone has the same information, either because groups don't have access or there is a breakdown in communication.

At SAR*SCENE* 2003 a two-hour Interoperability Summit, led by RCMP S/Sgt. Bryan Finney of the National Search and Rescue Secretariat, will look at interoperability issues in search and rescue.

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SAR Global 1

forges inter-provincial partnerships

by Mark Bowlby

Based in Chelsea Québec, Search and Rescue Global 1, a non-profit organization, is part of network of volunteer search and rescue groups serving the Eastern Ontario-Western Québec region. SAR Global 1 is unique in the sense that they serve both the province of Québec and Ontario. The organization was formed in 1996 following the disappearance of a local man during a winter storm. After the provincial police had called off their search efforts, family and community members were determined to continue the search.

Beverley Pick, founder of SAR Global 1 volunteered when asked by friends of the family to help as search manager to coordinate volunteers in a follow-up effort to find the missing man. Having experienced the recent loss of her own son in the mountains of B.C., and having participated in that unsuccessful search, Ms. Pick understood the family's desperation. On the first day of the renewed search effort (during one of the worst winter storms on record for the area) 150 untrained people arrived at the search to help. This 'unofficial' search continued for 14 days and was daunting. The following spring, the community of Wakefield rallied around the cause. Ground search training began and partnerships were established between ground SAR, trained K9 and fixed wing aircraft support teams.

Unique partnership begins

Within months SAR Global 1 was federally incorporated, a new regional police force (Municipalité Régionale des Collines) was established and a unique partnership began.

SAR Global 1 now contains over 40 members. Wilderness navigation, first aid, CPR, and other basic SAR skills are part of a core program for all new members, skills that are kept current by regular refresher courses offered by volunteer trainers. From this core group, members have formed specialized teams of advanced first responders, high angle rescuers, and recovery divers.

During operations trained search managers coordinate the entire team. These managers work with partners in Québec and Ontario from volunteer K-9 (Ottawa Valley SAR Dogs Association), aerial search teams, police agencies, and parks and emergency measures planning authorities. Search Manager in Command, Nicolas de Breyne, along with co-manager of operations Kristina Walker, continue to strive towards developing solid partnerships throughout the SAR community.

Avoiding burn-out

Two years ago, a unique approach to operations management was established. To avoid common 'burn-out' that many SAR team managers face, SAR Global 1 appointed de Breyne and Walker as co-managers of operations. Together, they work to ensure that training, equipment and everything surrounding operational capability are taken care of. De Breyne explains "Our goal is to provide police agencies with reliable and professional SAR expertise on a voluntary basis. Everything we do – mandatory training, criminal police checks, and meetings with police agencies to present our capabilities for their consideration – is done to meet this goal".

SAR Global 1 also works with children to help prevent searches. They offer the RCMP's *Hug a Tree and Survive* prevention program to local schools and youth groups. The program teaches basic survival skills and woods-proofing.

Calls for assistance range from lost hikers in the wilderness to urban searches for hospital walk-aways. Like thousands of other SAR volunteers across the country, members must juggle the ad hoc nature of SAR calls with family and professional responsibilities, and must also commit to regular training. To maintain an effective level of operations during a search, SAR Global 1 needs to draw from a large volunteer base. While an active recruitment effort has increased membership over the past year, a need for new members still exists.

For more information on SAR Global 1 contact sarglobal1@canada.com or www.geocities.com/sarglobal1

Mark Bowlby is a volunteer with SAR Global 1. ■

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Indirect communication from one party to another through three different search groups can lead to a break in communication and sometimes misinformation.

For example, the ground searchers who, with ground-to-air capability, need to contact the air resources who might not be able to do so because the officers don't know the frequency of their radios and are unable to establish direct communication with air resources.

The first recommendations of the working group discussed confirming the root causes of communication problems, the extent of these problems and finding new technology to resolve this interoperability issue.

There are agencies and companies studying communications and interoperability, but this issue won't be solved quickly. It will take many meetings and multi-jurisdictional exercises before accomplishing a seamless search and rescue program. While our system is good, there is always room for improvement. ■

Standardization of equipment will help eliminate interoperability barriers.

NOTES FROM A SPOTTER

by J.M. Bruno Pepin, OstJ

On a search mission, every crewmember performs a particular duty, but without the spotters raking the ground for signs of the search target, no successful conclusion could be achieved. Like other members of the search team, the spotter's task demands alertness and efficiency.

Spotting techniques are mastered by repeating exercises on the ground and in flight, with an understanding that an aircraft crash site may not reveal itself as obviously as a complete vehicle. This means the spotter must watch for abnormalities in the scanned range and keep a sharp eye until identification is satisfactory.

Courtesy of CASARA, this picture shows a spotter training exercise involving 424 Squadron and a C-130 Hercules in Thunder Bay.

Naturally, open communications between the rear seats and the front seats about possible target sightings and determining the 'actual visual search' above the scanning zone will maximize the chances of success, as will alternating 'on and off' task periods.

Keeping a high level of skill

I had the opportunity to fly to North Bay for a joint SAREX for a weekend. It was instructive and challenging to conduct nighttime as well as daytime searches, but also rewarding in terms of experience and teamwork.

Mission briefing and active participation in the task planning should clearly answer any flight safety concerns, search patterns, area covered and particulars of the target – a person, a marine vessel or a missing aircraft.

I joined the Ottawa unit of the Civil Air Search and Rescue Association (CASARA) in 1999 and I believe it is a well-administered organization with sufficient resources to answer calls from the Joint Rescue Coordination Centre Trenton, and to be able to continue to refine its work with computer-assisted GPS. Past missions varied from locating a 'moving ELT' across town to participating in a demanding five-day air search with the military for a brand new helicopter missing in Algonquin Park.

Our ground crew, with first aid capability, is the latest addition in a partnership with St. John Ambulance. Dedicated men and women meet every month for training and air exercises to maintain their efficiency within the CASARA guidelines and to be ready to answer the call of duty whenever a task is presented to them.

J.M. Bruno Pepin is a volunteer with the CASARA Ottawa unit. ■

Cooperation leads to the successful rescue of a

lost four-year-old boy

Four-year-old Justin Leblanc was cold, exhausted and unable to move after being lost for over six hours in the Nova Scotia woods. When the search helicopter spotted and hovered over him, he sat up briefly but quickly lay down again – exhausted from his ordeal. A few more hours of being lost and the reunion that was to occur may not have been so joyous.

Justin went missing from his home a short distance from the nearby ballpark between 9:00 and 9:30 on the morning of June 7, 2003. It was believed that a large dog, which belonged to Justin's neighbour and had also been missing since that morning, was with the child. One clue to his location was his boots found stuck in the mud earlier in the afternoon. It looked like he walked right out of them and continued away from the ballpark.

Teams go into action

A multi-organization search was quickly mobilized, including members of the Yarmouth Civil Aviation Search and Rescue Association (CASARA), the Yarmouth Ground Search and Rescue and Barrington Ground Search and Rescue teams, the RCMP, the Pubnico Fire Department, paramedics and local volunteers. A search effort would be made from the ground and from the sky to find Justin.

A Department of Natural Resources (DNR) helicopter was sent to the search and CASARA spotters, Becky Cottreau and Cliff Gavel, were taken onboard to spot the boy from the air. After flying for an hour or so with no positive results, they began flying a grid search across West Pubnico. At approximately 3:35 pm, Cliff Gavel called the helicopter around and all on board were greatly relieved to see the big yellow dog only a few feet away from the child, who was lying under a small tree.

Because the terrain was too poor to allow the helicopter to land, the aircraft directed a ground team to follow them to him, where they hovered until he was in the arms of one the members of the ground search and rescue team. Within 10 minutes the team was back to the ball-park. Paramedics gave the boy a thorough check-up to ensure that he was okay. Later his father reported that Justin was tired, cold and somewhat dehydrated but, all things considered, he was fine. The father also expressed his heartfelt thanks on behalf of Justin's family for the efforts of all involved in the rescue of his son.

A searcher onboard a helicopter spotted Justin lying under a small tree after being lost for six hours in the Nova Scotia woods.

Training and coordination saved Justin's life

Searcher Becky Cottreau, declared that "it was an absolutely incredible day to be a CASARA member! This truly is what all of our training is for and I can honestly say that the instant that we were able to positively identify Justin and to verify that he was not seriously injured was the best CASARA moment that I have ever had in my nearly 14 years as a CASARA member!"

This search and rescue was an excellent example of a well-coordinated activity between ground and air search and rescue resources in Nova Scotia. It shows the great progress that these organizations are making toward seamless search service – so that others may live. ■

Don't miss SAR*SCENE* 2003
Kingston, Ontario, **October 15-18**

- *Over 70 presentations*
- *More than 50 exhibits*
- *Search & rescue games and demonstrations*

Co-hosted by the National Search and Rescue Secretariat, the Ontario Provincial Police with the help of the Ontario Search and Rescue Volunteer Association

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SAR*SCENE* 2003

Kingston, Ontario, October 15-18, 2003

www.nss.gc.ca

The National Search and Rescue Secretariat and the Ontario Provincial Police, with the help of the Ontario Search and Rescue Volunteer Association, present the 12th Annual Workshop.

WORKSHOP REGISTRATION

Name _____ Title _____

Organization _____

Address _____

City _____ Province _____ Country _____ Postal Code _____

Phone _____ Fax _____ E-mail _____

AWARDS BANQUET

- ❒ I will attend the Awards Banquet on Saturday, October 18
- ❒ I will have ___ guest(s) accompanying me to the Banquet ($35 per person)
- ❒ Vegetarian
- ❒ Allergic to _____

SAR*SCENE* GAMES

Team Name: _____

Team members: (4 per team*)

1 _____

2 _____

3 _____

4 _____

** all team members are required to register*

CANINE GAMES

Canine Team Name: _____

Team members: (dog and handler*)

1 _____

2 _____

** Handler is required to register*

REGISTRATION FEES

Workshop	*Fee*	*Number*	*Total*
Until August 31	$90 x	_____	_____
From September 1	$125 x	_____	_____
Banquet	$35 x	_____	_____
		Total	_____

METHOD OF PAYMENT

Cheques/money orders are payable to SAR*SCENE* and mailed to NSS with this form. No reimbursement for cancellations after September 30, 2003. All cancellations must be received in writing.

I will pay by:

❒ cheque/money order (enclosed) ❒ MC ❒ Visa

Card #: _____ Exp. Date: _____

Name of card holder: _____ Signature: _____

PRE-WORKSHOP

For more information on pre-workshop courses go to the SAR*SCENE* Website at *www.nss.gc.ca/site/SARScene/workshop/index_e.asp* or call 1-800-727-9414.

IMPORTANT: Fees and payment will be handled by course instructors. Please contact your instructor before SAR*SCENE* to ensure no changes have been made to your course's schedule.

FOR MORE INFORMATION, PLEASE CONTACT:

Registration — Lynn Tremblay
(613) 996-4737 or 1 800 727-9414
ltremblay@nss.gc.ca

Games — Carole Smith
(613) 996-3727 or 1 800 727-9414
csmith@nss.gc.ca

Tradeshow — Tina Bouchard
(613) 992-8215 or 1 800 727-9414
tbouchard@nss.gc.ca

RETURN THIS FORM TO:

Lynn Tremblay
SAR*SCENE* 2003 Registrar
National Search and Rescue Secretariat
275 Slater Street, 4th Floor
Ottawa, ON K1A 0K2
Fax: (613) 996-3746